

Notice of Allowability

Application No.

09/887,273

Examiner

Roberto Rábago

Applicant(s)

BROOKHART ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/11/2004.
2. ☒ The allowed claim(s) is/are 563-574.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Examiner's Amendment

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. In response to applicant's amendments filed on 8/31/2004 and 9/11/2004, notices of non-compliant amendment were mailed 9/8/2004 and 9/23/2004. In order to clarify the status of the claims and to complete the record, the following examiner's amendment is made. The amendment addresses the issue for which applicants were mailed said notices of non-compliant amendment. In effect, the amendment restores the claims to the condition previously under appeal, for which applicants won a favorable decision from the Board of Patent Appeals and Interferences. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Ms. Gail Dalickas on 9/27/2004.

In the claims: The following claim listing will serve to replace all prior versions of the claims in the application.

1-562 (canceled).

563. (currently amended) A process for the production of a polyolefin having at least 50 branches per 1000 methylene groups and at least two branches of different lengths containing less than 6 carbon atoms each, comprising the step of polymerizing one or more monomers of the formula $H_2C=CH(CH_2)_eG$, wherein

G is hydrogen or $-CO_2R^1$,

e is 0 or an integer of 1 to 20,

R^1 is hydrogen, hydrocarbyl or substituted hydrocarbyl, and

in at least 50 mole percent of said monomers G is hydrogen,

by contacting said one or more monomers with a transition metal containing coordination polymerization catalyst under polymerizing conditions such that in said polyolefin:

(i) the number of branches per 1000 methylene groups is 90% or less than the number of theoretical branches per 1000 methylene groups, or

(ii) the number of branches per 1000 methylene groups is 110% or more of theoretical branches per 1000 methylene groups; or

(iii) when there should be no branches theoretically present, said polyolefin has 50 or more branches per 1000 methylene groups

~~wherein said transition metal is Ni or Pd.~~

564. (original) The process as recited in claim 563, wherein said one or more monomers are contacted with said transition metal containing coordination polymerization catalyst under polymerizing conditions such that in said polyolefin:

(i) the number of branches per 1000 methylene groups is 80% or less than the number of theoretical branches per 1000 methylene groups, or

(ii) the number of branches per 1000 methylene groups is 120% or more of theoretical branches per 1000 methylene groups; or

(iii) when there should be no branches theoretically present, said polyolefin has 75 or more branches per 1000 methylene groups.

565.(currently amended) A process for the production of a polyolefin having at least 50 branches per 1000 methylene groups and at least two branches of different lengths containing less than 6 carbon atoms each, comprising the step of polymerizing one or more monomers of the formula $H_2C=CH(CH_2)_eG$, wherein

G is hydrogen or $-CO_2R^1$,

e is 0 or an integer of 1 to 20,

R^1 is hydrogen, hydrocarbyl or substituted hydrocarbyl, and

in at least 50 mole percent of said monomers G is hydrogen,

by contacting said one or more monomers with a transition metal containing coordination polymerization catalyst under polymerizing conditions such that in said polyolefin:

- (1) there are at least 50 branches of the formula $-(CH_2)_fG$ per 1000 methylene groups, wherein $e \neq f$, and/or
- (2) for any single monomer of the formula $H_2C=CH(CH_2)_eG$ there are
 - (a) less than 90% of the number of theoretical branches per 1000 methylene groups of the formula $-(CH_2)_fG$ and $f=e$, or
 - (b) more than 110% of the theoretical branches per 1000 methylene groups of the formula $-(CH_2)_fG$ and $f=e$

~~wherein said transition metal is Ni or Pd.~~

566.(original) The process as recited in claim 565 wherein said one or more monomers are contacted with a transition metal containing coordination polymerization catalyst under polymerizing conditions such that in said polyolefin:

- (1) there are at least 50 branches of the formula $-(CH_2)_fG$ per 1000 methylene groups, wherein $e \neq f$, and/or
- (2) for any single monomer of the formula $H_2C=CH(CH_2)_eG$ there are
 - (a) less than 80% of the number of theoretical branches per 1000 methylene groups of the formula $-(CH_2)_fG$ and $f=e$, or
 - (b) more than 120% of the theoretical branches per 1000 methylene groups of the formula $-(CH_2)_fG$ and $f=e$.

567.(original) The process as recited in claim 563, wherein said monomer is ethylene only.

568.(original) The process as recited in claim 564, wherein said monomer is ethylene only.

569.(original) The process as recited in claim 565, wherein said monomer is ethylene only.

570.(original) The process as recited in claim 566, wherein said monomer is ethylene only.

571.(original) The process as recited in claim 563, wherein said monomer is propylene only.

572.(original) The process as recited in claim 564, wherein said monomer is propylene only.

573.(original) The process as recited in claim 565, wherein said monomer is propylene only.

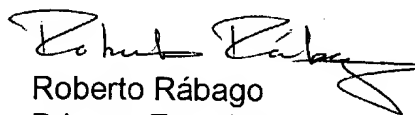
574.(original) The process as recited in claim 566, wherein said monomer is propylene only.

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Roberto Rábago
Primary Examiner
Art Unit 1713

RR
September 27, 2004